

 <p align="center"> United States Environmental Protection Agency Washington, DC 20460 Interagency Agreement/Amendment Part 1 - General Information </p>		1. EPA IA Identification Number DW-089-92483101 - 0		2. Funding Location by Region EPA R10	
		3. Other Agency IA ID Number (if known)		4. Awarding Office IASSC East	
		5. Type of Action New		6. IA Specialist: Leon Smith 202-564-5301	
7. Name and Address of EPA Organization US Environmental Protection Agency IASSC East 1200 Pennsylvania Avenue, NW Mail code 3903R Washington, DC 20460			8. Name and Address of Other Agency Department of Energy Marine Sciences Laboratory/Coastal Sciences Division 1100 Dexter Avenue, Suite 400 Seattle, WA 98109		
9. DUNS: 029128894		10. BETC: DISB		11. DUNS: 032987476	
12. BETC: COLL					
13. Project Title and Description Salish Sea Model - Continuing Development of New Capabilities and Applications This agreement with DOE - PNNL and the EPA proposed a scope of work is based on tasks designed to take the existing Salish Sea Model (SSM) biogeochemical model to a completed nutrient-phytoplankton-zooplankton-detritus style formulation. The detritus in FVCOM-ICM (biogeochemical or water quality code in SSM) is addressed through dissolved and particulate organic carbon components. This effort will include addition of eelgrass through the submerged aquatic vegetation module and will result in improvements to nutrient interactions between phytoplankton, eelgrass, and sediment fluxes simulated in SSM. This effort will also include addition of TSS for computing turbidity plumes to accurately represent light availability and explicit incorporation of zooplankton for food web assessments.					
14. EPA Project Officer (Name, Address, Telephone Number) Melissa Whitaker 1200 Sixth Avenue, Suite 900 (OWW-193) Seattle, WA 98101 206-553-2119 E-Mail: whitaker.melissa@epa.gov FAX:			15. Other Agency Project Officer (Name, Address, Telephone) Tarang Khangaonkar 1100 Dexter Avenue, Suite 400 Seattle, WA 98109 206-528-3053 E-Mail: tarang.khangaonkar@pnnl.gov; pnsowfo@science.doe.gov FAX:		
16. Project Period: 10/01/2017 to 09/30/2019			17. Budget Period: 10/01/2017 to 09/30/2019		
18. Scope of Work (See Attachment) See Attached					
19. Employer/Tax ID No. 520852695		20. CAGE No: 347A4		21. ALC: 68-01-0727	
22. Statutory Authority for Transfer of Funds and Interagency Agreement Clean Water Act: Sec. 104(b)(2)					23. Other Agency Type Federal Agency
24. Revise Reimbursable Funds and Direct Fund Cites (only complete if applicable)					
	Previous Funding	This Action	Amended Total		
Revise Reimbursable (in-house)			0.00		
Direct Fund Cite (contractor)			0.00		
Total			0.00		
Funds	Previous Amount	Amount This Action	Total Amount		
25. EPA Amount		\$267,799.00	\$267,799.00		
26. EPA In-Kind Amount			\$0.00		
27. Other Agency Amount			\$0.00		
28. Other Agency In-Kind Amount			\$0.00		
29. Total Project Cost		\$267,799.00	\$267,799.00		
30. Fiscal Information					
Treas. Symbol	DCN	FY	Appropriation	Budget Org	PRC
6817/180108	1710MPP005	1718	B	10M	202BK5
					Object Class
					2506
					Site/Project
					Cost Org
					Ob/De-Ob Amt
					267,799.00
					267,799

Part II - Approved Budget				EPA IAG Identification Number
				DW-089-92483101 - 0
31. Budget Categories	Itemization of All Previous Actions	Itemization of This Action	In-Kind Itemization of This Action	Itemization of Total Project Cost to Date
(a) Personnel		\$87,584.00		\$87,584.00
(b) Fringe Benefits		\$24,895.00		\$24,895.00
(c) Travel		\$2,395.00		\$2,395.00
(d) Equipment		\$0.00		\$0.00
(e) Supplies		\$0.00		\$0.00
(f) Procurement / Assistance		\$0.00		\$0.00
(g) Construction		\$0.00		\$0.00
(h) Other		\$5,642.00		\$5,642.00
(i) Total Direct Charges	\$0.00	\$120,516.00	\$0.00	\$120,516.00
(j) Indirect Costs:	\$0.00	\$147,283.00		\$147,283.00
Charged - Amount Rate: % Base: \$ Not Charged: Funds-Out: Not charged by Other Agency Estimate by other Agency Amount \$				
(k) Total (EPA Share 100.00 %) (Other Agency Share 0.00 %)	\$0.00	\$267,799.00	\$0.00	\$267,799.00
32. How was the IDC Base calculated? It is a variable by task, personnel within DOE, PNNL				
33. Is equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Identify all equipment costing \$1,000 or more)				
34. Are any of these funds being used on Procure/Assistance agreements? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Type of Procure/Assistance Agreement				
Contractor/Recipient Name (if known)	Total Procure/Assistance Amount Under This Project		Percent Funded by EPA (if known)	
	Total \$ 0.00			
Part III - Funding Methods and Billing Instructions				
35.	(Note: EPA Agency Location Code (ALC) - 68010727)			
<input checked="" type="checkbox"/> Disbursement Agreement	Request for repayment of actual costs must be itemized on SF 1080 and submitted to the Financial Management Office, Cincinnati, OH 45268-7002:			
<input checked="" type="checkbox"/> Repayment	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Upon Completion of Work			
<input type="checkbox"/> Advance	Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Allocation Transfer-Out	Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hdqtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.			
36. <input type="checkbox"/> Reimbursement Agreement <input type="checkbox"/> Repayment <input type="checkbox"/> Advance <input type="checkbox"/> Allocation Transfer-In				
Other Agency's Billing Address (include ALC or Station Symbol Number)			Other Agency's Billing Instructions and Frequency	
			Other Agency TAS 089X0222	

Part IV - Acceptance Conditions**EPA Identification Number**

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37. Terms and Conditions, when included, are located at the end of the 1610-1, or as an attachment.**Part V - Offer and Acceptance**

Note: A) For Fund-out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants and IA Management Division for Headquarters agreements or to the appropriate EPA Regional IA administration office within 3 calendar weeks after receipt or within any extension of time that may be granted by EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature.

Failure to return the properly executed document within the prescribed time may result in the withdrawal of offer by EPA. Any change to the agreement/amendment by the other agency after the document is signed by the EPA Award Official, which the Award Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.

B) For Funds-In actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IA administration office for signature on behalf of the EPA. EPA will return one original copy after acceptance returned to the other agency after acceptance.

EPA IA Administration Office (for administrative assistance)**EPA Program Office (for technical assistance)****38. Organization/Address****39. Organization/Address**

U.S. Environmental Protection Agency
IASSC East
1200 Pennsylvania Avenue, NW Mail code 3903R
Washington, DC 20460

US Environmental Protection Agency
R10 - Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Award Official on Behalf of the Environment Protection Agency

40. Digital signature applied by EPA Award Official | FOR Tony R. Fournier - Chief Fellowship IA and SEE Branch
Michelle Messick - AO delegate

Date

08/29/2017

Authorizing Official on Behalf of the Other Agency**41. Signature****Typed Name and Title****Date**